What is claimed is:

1. A stage assembly that moves a device relative to a mounting area, the stage assembly comprising:

a stage that retains the device;

a stage mover assembly connected to the stage, the stage mover assembly moving the stage and generating reaction forces; and

a reaction assembly coupled to the stage mover assembly, the reaction assembly including a first reaction subassembly having a first mass, a second reaction subassembly having a second mass and a connector assembly that connects the reaction subassemblies together, allows for relative movement of the masses with at least one degree of freedom and inhibits relative movement of the masses with at least one degree of freedom.

2. The stage assembly of claim 1 wherein the stage mover assembly moves the stage with two degrees of freedom, the reaction assembly reduces the reaction forces in the two degrees of freedom that are transferred to the mounting area, and the connector assembly allows for relative movement of the masses with at least two degrees of freedom.

3. The stage assembly of claim 2 wherein the stage mover assembly moves the stage along a first axis and along a second axis, the axes being orthogonal to each other, and the connector assembly allows for relative movement of the masses along the first axis and inhibits relative movement of the masses along the second axis.

4. The stage assembly of claim 3 wherein the reaction assembly adjusts the position of the masses along a third axis relative to the mounting area.

5. The stage assembly of claim 4 wherein the reaction assembly independently adjusts the position of the masses along the Z axis.

6. The stage assembly of claim 3 wherein the masses move independently along the first axis and the masses move concurrently along the second axis relative to the mounting area.

7. The stage assembly of claim 6 wherein when the stage mover assembly moves the stage along the first axis in one direction, at least one of the masses moves along the first axis in an opposite direction.

8. The stage assembly of claim 7 wherein when the stage mover assembly moves the stage along the second axis in one direction, the masses move concurrently along the second axis in the opposite direction.

9. The stage assembly of claim 1 wherein the first reaction subassembly includes a first X guide that guides the movement of the first mass along a first axis and a first Y guide that guides the movement of the first mass and the first X guide along a second axis.

10. The stage assembly of claim 9 wherein the first reaction subassembly includes a first trim assembly that adjusts the position of the first mass along the first axis and adjusts the position of the first mass and the first X guide along the second axis.

11. The stage assembly of claim 10 wherein the first trim assembly includes a first X trim mover that adjusts the position of the first mass along the first axis and a Y trim mover that adjusts the position of the first mass and the first X guide along the second axis.

12. The stage assembly of claim 1 wherein the reaction assembly independently adjusts the position of the masses along a first axis.

13. The stage assembly of claim 1 wherein the connector assembly secures the masses together.

14. The stage assembly of claim 1 wherein each reaction subassembly includes an X guide that guides the motion of the respective masses along a first axis and wherein the connector assembly secures the X guides together.

15. The stage assembly of claim 1 wherein the connector assembly includes a pair of spaced apart connectors.

16. The stage assembly of claim 15 wherein at least one of the connectors includes a bar and a joint.

17. The stage assembly of claim 1 further comprising a stage base that supports the stage.

18. The stage assembly of claim 17 further comprising a base isolator that adjusts the position of the stage base relative to the mounting area and the masses.

19. The stage assembly of claim 17 wherein the stage mover assembly includes a guide bar that guides motion of the stage, the guide bar being supported by the reaction assembly independently of the stage base.

20. The stage assembly of claim 17 wherein the stage mover assembly includes a guide bar that guides motion of the stage, the guide bar being supported by the stage base.

21. The stage assembly of claim 17 where the reaction assembly is supported by the stage base.

22. The stage assembly of claim 17 further comprising a subassembly adjuster that independently adjusts the position of the masses relative to the stage base and the mounting area.

23. An exposure apparatus including the stage assembly of claim 1.

24. A device manufactured with the exposure apparatus of claim 23.

25. A wafer on which an image has been formed by the exposure apparatus of claim 23.

26. A method for making a stage assembly that moves a device relative to a mounting area, the method comprising the steps of:

providing a stage that retains the device;

connecting a stage mover assembly to the stage, the stage mover assembly moving the stage and generating reaction forces; and

coupling a reaction assembly to the stage mover assembly, the reaction assembly including a first reaction subassembly having a first mass, a second reaction subassembly having a second mass and a connector assembly that connects the reaction subassemblies together, allows for relative movement of the masses with at least one degree of freedom and inhibits relative movement of the masses with at least one degree of freedom.

27. The method of claim 26 wherein the stage mover assembly moves the stage with two degrees of freedom and the reaction assembly reduces the reaction forces in the two degrees of freedom that are transferred to the mounting area.

28. The method of claim 27 wherein the stage mover assembly moves that stage along a first axis and along a second axis, the axes being orthogonal to each other, and the connector assembly allows for relative movement of the masses along the first axis and inhibits relative movement of the masses along the second axis.

29. The method of claim 28 wherein the reaction assembly adjusts the position of the masses along a third axis relative to the mounting area.

30. The method of claim 29 wherein the reaction assembly independently adjusts the position of the masses along the Z axis.

31. The method of claim 28 wherein the masses move independently along the first axis and the masses move concurrently along the second axis relative to the mounting area.

32. The method of claim 31 wherein when the stage mover assembly moves the stage along the first axis in one direction, at least one of the masses moves along the first axis in an opposite direction.

33. The method of claim 31 wherein when the stage mover assembly moves the stage along the second axis in one direction, the masses move concurrently along the second axis in the opposite direction.

34. The method of claim 26 wherein the first reaction subassembly includes a first X guide that guides the movement of the first mass along a first axis and a first Y guide that guides the movement of the first mass and the first X guide along a second axis.

35. The method of claim 34 wherein the first reaction subassembly includes a first trim assembly that adjusts the position of the first mass along the first axis and adjusts the position of the first mass and the first X guide along the second axis.

36. The method of claim 35 wherein the first trim assembly includes a first X trim mover that adjusts the position of the first mass along the first axis and a Y trim mover that adjusts the position of the first mass and the first X guide along the second axis.

37. The method of claim 26 wherein the reaction assembly independently adjusts the position of the masses along a first axis.

38. The method of claim 26 wherein the connector assembly secures the masses together.

39. The method of claim 26 wherein each reaction subassembly includes an X guide that guides the motion of the respective masses along a first axis and wherein the connector assembly secures the X guides together.

40. The method of claim 26 wherein the connector assembly includes a pair of spaced apart connectors.

41. The method of claim 40 wherein at least one of the connectors includes a bar and a joint.

42. The method of claim 26 further comprising a stage base that supports the stage.

43. The method of claim 42 further comprising a base isolation that adjusts the position of the stage base relative to the mounting surface and the masses.

44. The method of claim 42 wherein the stage mover assembly includes a guide bar that guides motion of the stage, the guide bar being supported by the reaction assembly independently of the stage base.

45. The method of claim 42 wherein the stage mover assembly includes a guide bar that guides motion of the stage, the guide bar being supported by the stage base.

46. The method of claim 42 wherein the reaction assembly is supported by the stage base.

47. The method of claim 26 wherein each reaction subassembly includes a mass support that allows the masses to move independently along a first axis and allows the masses to move concurrently along the second axis.

48. A method for making an exposure apparatus that forms an image on a wafer, the method comprising the steps of:

providing an irradiation apparatus that irradiates the wafer with radiation to form the image on the wafer; and

providing the stage assembly made by the method of claim 26.

49. A method of making a wafer utilizing the exposure apparatus made by the method of claim 48.

50. A method of making a device including at least the exposure process: wherein the exposure process utilizes the exposure apparatus made by the method of claim 48.